

## ABSTRACT

The invention relates to a method for the coproduction of methanol and ammonia having the following steps:

1. Natural gas (stream 1), steam and oxygen are mixed together in a reactor A, wherein the natural gas is partially oxidized and further reformed with the aid of catalysts,

2. The gas mixture taken from reactor A is divided into stream (stream 2) for the methanol synthesis in a unit E and another stream (stream 3) for hydrogen production,

3. The carbon monoxide present in the stream (stream 3) for the hydrogen production is converted into carbon dioxide with aid from catalysts and intermediate cooling stages,

4. Remaining impurities such as methane, traces of carbon monoxide and argon are washed out in a purification unit D, and hydrogen (streams 6, 8) is fed to the methanol synthesis in the unit E and the ammonia synthesis in a unit F,

5. The methanol synthesis gas (stream 7) is converted into methanol (stream 9) in a unit E with the help of a catalyst, and the methanol is brought to the required purity by distillation,

6. The ammonia synthesis gas (stream 8) is compressed and with the help of a catalyst is converted to ammonia (stream 10) in unit F, and the ammonia is separated from the recovered synthesis gas by partial condensation.